

**ENGINEERING STATEMENT SUPPORTING A
PETITION FOR RECONSIDERATION**

prepared for

Pacific and Southern Company, Inc.

WTSP-DT St. Petersburg, Florida

Facility ID: 11290

Ch. 10 17.3 kW (MAX-DA) 457 m

Pacific and Southern Company, Inc. (“P&S”) is the licensee of analog television station WTSP(TV) Channel 10 and digital station WTSP-DT Channel 24, Facility ID: 11290, St. Petersburg, Florida. P&S elected (for WTSP’s post-transition facility) operation on its current analog Channel 10 in place of the 1998 allotted Channel 24. However, as a result of the channel election process, the actual digital coverage “footprint” will be reduced from what it presently serves with its analog antenna. The final antenna pattern allotted by the Commission is different than the antenna pattern P&S wishes to employ for its post-transition digital operation for WTSP. Using the existing top-mounted directional analog antenna system as a practical alternative would permit WTSP to operate without a reduction in power and avoid a substantial loss of coverage.

Accordingly, the instant engineering statement has been prepared to support a request for a change in the station’s “certification” to permit replication of the authorized analog Grade B contour and to provide a path for practical implementation using station’s existing directional Channel 10 antenna pattern.

Change of Certification

WTSP recently installed a new analog Channel 10 antenna¹ which it wishes to employ for its post-transition digital operation. However, differences in the installed Channel 10 antenna’s directional pattern and the pattern of the allotted digital facility in the final table of allotments² require a severe reduction in effective radiated power (“ERP”) to keep the service contour from the WTSP Channel 10 digital facility within the bounds of the allotted facility’s service contour, creating a substantial loss in coverage.

As an alternative, P&S proposes herein to modify its original certification to specify the authorized analog Grade B contour as the “carry-over” coverage “footprint” for its final

¹ See the construction permit, BPCT-20041025ADK and the pending license application, BLCT-20070629ABH.

² See Appendix B, “*Seventh Report and Order And Eighth Further Notice of Proposed Rule Making*”, MB Docket No. 87-268, FCC 07-138, Released August 6, 2007.

Channel 10 DTV facility. Using the existing Channel 10 directional antenna pattern, a Channel 10 digital facility was designed that closely replicates the coverage of the Grade B contour³. The technical details of the proposed facility are provided in **Table I**. **Figure 1** provides a coverage comparison of the authorized analog Grade B contour with the proposed and allotted digital facilities. As demonstrated in **Figure 1**, the proposed change in certification allows for replication of the currently authorized analog coverage “footprint” over land areas. As shown, a directional antenna implementation of the proposed certification easily achieves replication of the current analog Grade B coverage.

For completeness, a detailed interference study was conducted in accordance with the terrain dependent Longley-Rice point-to-point propagation model, per the Commission’s Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, July 2, 1997 (“OET-69”)⁴. The interference study examined the net change in interference as experienced by other stations that would result from the proposed facility (in lieu of the reference WTSP-DT allotted facility). Only facilities listed in Appendix B of the Seventh Report and Order were studied. As shown in **Table II**, no new interference to pertinent affected stations is caused and interference to the post-transition allotment facility for WJXX(TV), Orange Park, Florida, is reduced.

Conclusion

As demonstrated above, coverage for the WTSP-DT post-transition operation will be severely limited if the currently allotted DTV facility is employed as a coverage boundary, due to differences in the directional antenna patterns. By changing the WTSP-DT certification to closely replicate the authorized Grade B contour, coverage by the Channel 10 DTV facility maintains the existing coverage “footprint” and service to the public. Further, the proposed DTV facility can be easily implemented with the existing installed Channel 10 antenna so that the analog shutdown deadline of February 17, 2009 can be met.

³ The service contour of the proposed facility does not extend past the analog Grade B contour over land area. There is a mild extension of the service contour past the analog Grade B contour over the Gulf of Mexico.

⁴ The implementation of OET-69 for this study followed the guidelines of OET-69 as specified therein. A standard cell size of 2 km was used. Comparisons of various results of this computer program to the Commission’s implementation of OET-69 show good correlation.

Certification

The undersigned hereby certifies that the foregoing statement was prepared by him or under his direction, and that it is true and correct to the best of his knowledge and belief. Mr. Mertz is a principal in the firm of *Cavell, Mertz & Associates, Inc.*, holds a Bachelor of Science degree from Oglethorpe University, and has submitted numerous engineering exhibits to the Federal Communications Commission. His qualifications are a matter of record with that agency.



Richard H. Mertz
November 13, 2007

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Attachments

| | |
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| Table I | Proposed Allotment Parameters |
| Table II | Interference Study Summary |
| Figure 1 | Coverage Contour Comparison Ch. 10 Analog Grade B Contour Ch 10 R&O Allotment Facility Proposed WTSP-DT Ch. 10 Allotment |

Table I
PROPOSED ALLOTMENT PARAMETERS
 prepared for
Pacific and Southern Company, Inc.
 WTSP-DT St. Petersburg, Florida
 Facility ID: 11290
 Ch. 10 17.3 kW (MAX-DA) 457 m

| | |
|--------------------------|---|
| Channel | DTV Channel 10 |
| Site Coordinates | 28° 11' 04" N 82° 45' 39" W (NAD-27) |
| Radiation Center | 461.1 meters above mean sea level 457 meters above average terrain |
| Effective Radiated Power | 17.3 kilowatts |

Directional Antenna Relative Field Pattern
 (FCC Antenna ID: 67949)

| Azimuth | Relative | Azimuth | Relative |
|----------------|-----------------|----------------|-----------------|
| (°T) | Field | (°T) | Field |
| 0 | 0.882 | 180 | 0.936 |
| 10 | 0.936 | 190 | 0.882 |
| 20 | 0.972 | 200 | 0.811 |
| 30 | 0.992 | 210 | 0.729 |
| 40 | 1.000 | 220 | 0.643 |
| 50 | 0.999 | 230 | 0.564 |
| 60 | 0.995 | 240 | 0.499 |
| 70 | 0.990 | 250 | 0.455 |
| 80 | 0.987 | 260 | 0.430 |
| 90 | 0.985 | 270 | 0.420 |
| 100 | 0.985 | 280 | 0.420 |
| 110 | 0.987 | 290 | 0.430 |
| 120 | 0.990 | 300 | 0.455 |
| 130 | 0.995 | 310 | 0.499 |
| 140 | 0.999 | 320 | 0.564 |
| 150 | 1.000 | 330 | 0.643 |
| 160 | 0.992 | 340 | 0.729 |
| 170 | 0.972 | 350 | 0.811 |

Table II
INTERFERENCE STUDY SUMMARY

prepared for

Pacific and Southern Company, Inc.

WTSP-DT St. Petersburg, Florida

Facility ID: 11290

Ch. 10 17.3 kW (MAX-DA) 457 m

| <u>Channel</u> | <u>Affected Station</u> | <u>City</u> | <u>State</u> | <u>7th R&O Table Baseline (2000 Census)</u> | <u>Calculated Baseline (2000 Census)</u> | <u>Interference Population 7th R&O facility (2000 Census)</u> | <u>Interference Population with Proposal (2000 Census)</u> | <u>Population Difference</u> | <u>New Interference</u> |
|----------------|-----------------------------|---------------|--------------|---|--|---|--|----------------------------------|-----------------------------|
| 9 | WINX-TV | Fort Myers | FL | 1,562,000 | | - - -No interference - - - | | | |
| 9 | NEW | Gainesville | FL | 500,000 | | - - -No interference - - - | | | |
| 10 | WPLG(TV) | Miami | FL | 4,931,000 | | - - -No interference - - - | | | |
| 10 | WJXX(TV) | Orange Park | FL | 1,318,000 | 1,318,901 | 11,523 | 10,716 | -807 | -0.06% |
| 10 | WALB(TV) | Albany | GA | 626,000 | 626,610 | 7,730 | 7,730 | 0 | 0.00% |
| 11 | WESH(TV) | Daytona Beach | FL | 3,125,000 | | - - -No interference - - - | | | |

